

ABSTRACT OF THE DISCLOSURE

A method for molding large parts, comprises the steps of providing a reinforced plastic melt comprising at least one thermoplastic material and reinforcement particles dispersed within the at least one thermoplastic material, the reinforcement particles comprising less than 15% of a total volume of the plastic melt, at least 50% of the reinforcement particles having a thickness of less than about 20 nanometers, and at least 99% of the reinforcement particles having a thickness of less than about 30 nanometers; communicating a tubular formation of the plastic melt to a mold assembly having a mold cavity defined by mold surfaces, the mold surfaces corresponding to a configuration of the part to be molded; applying pressurized gas to an interior of the tubular formation to expand the tubular formation into conformity with the mold surfaces; and solidifying the plastic melt to form the part; and removing the part from the mold assembly.